

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 05-293290
 (43)Date of publication of application : 09.11.1993

(51)Int.Cl.

D06F 35/00

(21)Application number : 04-122554
 (22)Date of filing : 16.04.1992

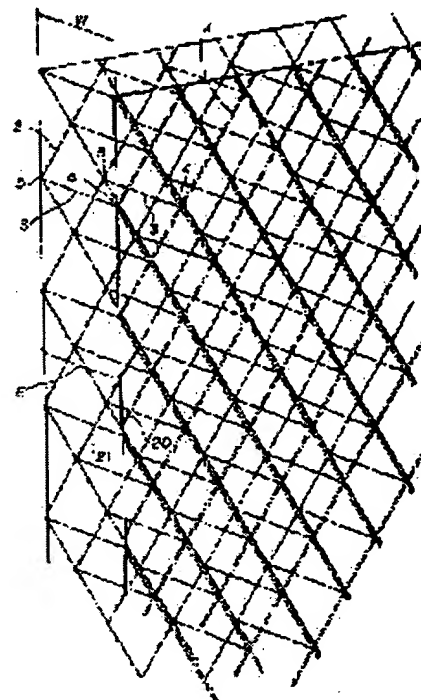
(71)Applicant : TOOTEX KK
 (72)Inventor : MORI SADAYORI

(54) WASHING NET

(57)Abstract:

PURPOSE: To provide a washing net which can maintain the solid shape of a bag and prevent the inflow of fiber rubbish into the bag even if it receives the push-press by the water current inside a washing machine or the pressure contact with other laundry.

CONSTITUTION: This net is made from double fabric, where surface fabric 1 and rear fabric 2 being knitted into mesh structure out of multifilament yarns are coupled by braid textures 3 for coupling of monofilament yarns thicker than single fibers constituting multifilament yarns and both fabrics stand face to face apart, and the cut piece are sewn together into a solid bag, and the margin of sewing together is covered with a cover tape. The double fabric, wherein the surface fabric and the rear fabric are coupled leaving space by monofilament yarns hereby, is firm and tensioned, and the margin of sewing together of it cut piece also is strong in shape preservability, and the solid bag shape is preserved favorably, and the circulation of washing liquid and the capture of fiber rubbish also become favorable.



LEGAL STATUS

[Date of request for examination] 01.07.1992
 [Date of sending the examiner's decision of rejection]
 [Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]
 [Date of final disposal for application]
 [Patent number] 2133411
 [Date of registration] 21.11.1997
 [Number of appeal against examiner's decision of rejection]
 [Date of requesting appeal against examiner's decision of rejection]
 [Date of extinction of right] 28.09.2002

Copyright (C); 1998,2003 Japan Patent Office

* NOTICES *

Japan Patent Office is not responsible for any damages caused by the use of this translation.

1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

CLAIMS

[Claim(s)]

[Claim 1] By multifilament yarn which consists of a several deniers continuous glass fiber group of a chemical fiber Table knitting fabric composed by coarse mesh like an atlas network edited by the mesh and a back fabric composed of same multifilament yarn by coarse mesh By the editing organization for connection of monofilament yarn of a chemical fiber thicker than a single fiber which constitutes said multifilament yarn A network for wash with which a bag body of a solid configuration is formed and a predetermined stitch of both knitting fabric is connected, a double knit consisted and confronted in a gap is formed, sewing of the intercept of this double knit is carried out, and the husk of the suture portion of each intercepts is carried out on a covering tape.

[Claim 2] A network for wash according to claim 1 made into knitting fabric of a coarse mesh with a back fabric finer than table knitting fabric.

[Claim 3] A network for wash according to claim 1 or 2 made into a size beyond about 10 times or it of a single fiber from which mono-filler MENNTO yarn of an editing organization for connection which connects table knitting fabric and a back fabric constitutes multifilament yarn.

[Claim 4] Claim 1 with which all stitches of table knitting fabric and a back fabric are connected in an editing organization for connection, a network for wash according to claim 2 or 3.

[Claim 5] Claim 1 in which an editing organization for connection which connects a stitch of table knitting fabric and a back fabric has a loop edited by tuck which crosses a stitch of a coarse mesh of table knitting fabric, claim 2, a network for wash according to claim 3 or 4.

[Translation done.]

* NOTICES *

Japan Patent Office is not responsible for any damages caused by the use of this translation.

1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Industrial Application] This invention relates to the saccate network for wash which contains the washing-ed and is thrown in into a washer at the time of wash.

[0002]

[Description of the Prior Art] As a saccate network for wash formed by **** of the line of thread made from a synthetic fiber, although various things are already proposed The network for wash is flattened by a pressure welding with the press by the stream within a washer, and other washing-ed etc. The fiber waste which a cleaning effect falls or floats in ***** flows into a network through the mesh of the network for wash, and adheres to the washing-ed in a network, and it has problems, like clearance of fiber waste becomes difficult at the time of desiccation.

[0003] What a manufacturing process increases, productivity falls, and the thing incorporating a ** form wire rod has a problem used as the cost high, and used the network as the duplex although what built the ** form wire rod into the network in order to prevent the above-mentioned flattening, the thing which used the network as the duplex in order to prevent an inflow into the network of fiber waste were proposed is inferior in firmness, and it has problems, like **** does not have ** in flattening.

[0004]

[Problem(s) to be Solved by the Invention] This invention can make firmness size, without using a ** form wire rod etc., moreover, the negotiation of wash liquid is not checked, but an inflow into the network of the fiber waste in wash liquid can be prevented, and it is making into the technical problem to offer the network for wash made in sewing of the same number of manufacturing processes as usual.

[0005]

[Means for Solving the Problem] In order to solve said technical problem, in invention of claim 1 By multifilament yarn which consists of a several deniers continuous glass fiber group of a chemical fiber Table knitting fabric composed by coarse mesh like an atlas network edited by the mesh and a back fabric composed of same multifilament yarn by coarse mesh By the editing organization for connection of monofilament yarn of a chemical fiber thicker than a single fiber which constitutes said multifilament yarn A predetermined stitch of both knitting fabric is connected, a double knit consisted and confronted in a gap is formed, and sewing of the intercept of this double knit is carried out, and a bag body of a solid configuration is formed and it is considering as a configuration that the husk of the suture portion of each intercepts is carried out on a covering tape.

[0006] A back fabric is made into knitting fabric of a stitch finer than table knitting fabric in invention of claim 2.

[0007] In invention of claim 3, it is considering as a configuration of having composed an editing organization for connection which connects table knitting fabric and a back fabric of about 10 times of a single fiber which constitutes multifilament yarn, or monofilament yarn of a size beyond it.

[0008] In invention of claim 4, it is considering as a configuration of having connected all the stitches of table knitting fabric and a back fabric in an editing organization for connection.

[0009] In invention of claim 5, it is considering as a configuration that an editing organization for connection which connects a stitch of table knitting fabric and a back fabric has a loop edited by tuck which crosses a stitch of a coarse mesh of table knitting fabric.

[0010]

[Function] It is the double knit consisted and confronted in the gap, according to invention of claim 1, table knitting fabric and a back fabric are connected in the editing organization for connection of monofilament yarn, since the editing organization for connection is formed with the monofilament yarn of a chemical fiber thicker than the single fiber which constitutes the multifilament yarn of the knitting fabric of the front reverse side, a flare is strong, and for this reason, said double knit is knitting fabric with a flare with the waist strong as a whole.

[0011] and the at least two-sheet pile configuration of the double knit in which the suture portion of each intercepts of the bag body which sutured the intercept of said double knit and was formed in three dimensions has a flare with the strong waist -- it is -- this suture portion -- further -- a covering tape -- a husk -- since it is sutured, the suture edge of said intercept discovers firmness ability equivalent to a ** form filament only by it.

[0012] For this reason, the network for wash discovers firmness ability with a solid configuration strong as a whole.

[0013] Moreover, since both table knitting fabric and a back fabric are composed by the coarse mesh like the atlas network edited by the mesh, the negotiation of the wash liquid of the network inside and outside for wash is good.

[0014] Furthermore, the network for wash is ***** of three persons called table knitting fabric, a back fabric, and the editing organization for connection, and it generates at the time of wash, and the prehension engine performance of the fiber waste which floats the inside of wash liquid is large, and the inflow of the fiber waste into the network for wash is prevented good.

[0015] According to invention of claim 2, a back fabric is the knitting fabric of a coarse mesh finer than table knitting fabric, and the prehension effect of fiber waste improves further.

[0016] According to invention of claim 3, the nerve and the flare of a double knit can improve remarkably and can strengthen firmness ability.

[0017] According to invention of claim 4, improvement in prehension effect nearby of the fiber waste is carried out with improvement in the nerve of a double knit, and the strength of a flare by the increment in the number of yarn.

[0018] Since according to invention of claim 5 the loop edited by the tuck of the editing organization for connection crosses the stitch of the coarse mesh of table knitting fabric at least and it is arranged, the prehension effect of the fiber waste which flowed into the stitch of this coarse mesh improves.

[0019]

[Example] Drawing 1, drawing 2, and drawing 3 are multifilament yarn which shows an example of implementation of invention of claim 1 and consists of a several deniers continuous glass fiber group of chemical fibers, such as nylon and polyester. The predetermined stitch 4 and five groups are connected by the editing organization 3 for connection, and the table knitting fabric 1 composed by the coarse mesh like the atlas network edited by the mesh and the back fabric 2 composed of the same multifilament yarn by the coarse mesh of the same organization as table knitting fabric 1 are consisted and confronted in a gap W, and forms the double knit 6.

[0020] Said editing organization 3 for connection is composed of the monofilament yarn of a chemical fiber thicker than the single fiber which constitutes the multifilament yarn which constitutes said table knitting fabric 1 and back fabric 2.

[0021] In the example of a graphic display, by forming the needle loop and sinker loop of a chain-stitch organization by the 30-denier monofilament in table knitting fabric 1 and a back fabric 2, although table knitting fabric 1 and a back fabric 2 are connected, it is not limited to this *****.

[0022] In drawing 1, the location and number of stitches 4 and 5 which table knitting fabric 1, a back fabric 2, the editing organization 3 for connection and a stitch 4, and 5 grades show only a location in model, and omit the graphic display of concrete ***** and are connected in the editing organization 3 for connection also show only the thing of a typical location in order to avoid **** of a streak.

[0023] As shown in drawing 2, after it was fabricated by the intercepts 7, 8, 9, and 10 of an abbreviation boat shape, and putting the edges 11 and 12 on the inside table as shown in drawing 3 and carrying out a husk on the covering tape 13, whenever said double knit 6 is sutured by one by the blind stitch 14 and shown in drawing 2, it comes, and it is considered as the network 15 for wash of a solid configuration.

[0024] Since a double knit 6 consists of monofilament yarn with the editing organization 3 for connection thicker than the single fiber which constitutes multifilament yarn, In addition to the waist being strong knitting fabric with thick cloth, the sutures 16, 17, 18, and 19 by the blind stitch 14 It is the structure where the husk of the two-sheet pile portion of a double knit 6 was carried out on the covering tape 13, and the firmness of these sutures 16, 17, and 18 and 19 portions has a large next door and firmness with the network 15 for wash strong [a solid configuration].

[0025] Moreover, both table knitting fabric 1 and the back fabric 2 are composed by the coarse mesh, since it has meshes 20 and 21, respectively, wash liquid circulates freely through this mesh, and the rate at which the fiber waste which floats in wash liquid is caught by table knitting fabric 1, a back fabric 2, and the editing organization 3 for connection becomes high.

[0026] Invention of claim 2 makes a fine screen the stitch slack mesh 21 of the coarse mesh of said back fabric 2 from the mesh 20 of table knitting fabric 1, raises the prehension engine performance of said fiber waste, and prevents better adhesion of fiber waste for the washing-ed in the network 15 for wash.

[0027] Invention of claim 3 makes monofilament yarn which forms the editing organization 3 for connection which connects table knitting fabric 1 and a back fabric 2 the thing of the size beyond about 10 times or it of the size of the single fiber which constitutes the multifilament yarn of table knitting fabric 1 and a back fabric 2, strengthens nerve of a double knit 6, and enlarges firmness of the network 15 for wash remarkable.

[0028] Invention of claim 4 makes sufficient firmness have, even when all the stitches of table knitting fabric 1 and a back fabric 2 are connected in the editing organizations 3 for connection, such as a chain-stitch organization, monofilament yarn which forms the editing organization 3 for connection is made thin and a double knit 6 is made flexible.

[0029] The editing organization 3 for connection which connects table knitting fabric 1 and a back fabric 2 is made into ***** which has the loop 22 edited by the tuck, the loop 22 edited by this tuck crosses the stitch slack mesh 20 of the coarse mesh of table knitting fabric 1 at least, and invention of claim 5 increases the prehension effect of said fiber waste, as shown in drawing 4.

[0030] Although there is no definition according to rank in ***** which forms the table knitting fabric 1 in this invention, a back fabric 2, and the editing organization 3 for connection, it passes as table knitting fabric 1 and a back fabric 2, the atlas network of a knitted fabric organization edited by the mesh etc. is desirable, and the organization of a chain-stitch organization, a straight line, or a slash type edited by leather etc. is desirable as an editing organization 3 for connection.

[0031] Moreover, there is no definition according to rank in sizes used for this invention, such as multifilament yarn and monofilament yarn, and it is suitably selected in consideration of the protection nature of the washing-ed, the distributivity of wash liquid, the firmness as a network for wash, the prehension nature of fiber waste, etc.

[0032]

[Effect of the Invention] According to invention of claim 1, it is effective in the double knit which consists of table knitting fabric, a back fabric, and an editing organization for connection turning into knitting fabric with a flare with the waist strong as a whole, and the firmness of a husk and the suture edge sutured becoming good [the firmness at the time of the wash as a large next door and a network for wash] on the covering tape of the intercepts of this double knit.

[0033] Moreover, since table knitting fabric and a back fabric are composed by the coarse mesh, the negotiation of wash liquid is good and the effect that the prehension engine performance of the fiber waste which floats the inside of the wash liquid at the time of wash becomes large is done so by ***** of three persons called table knitting fabric, a back fabric, and the editing organization for connection.

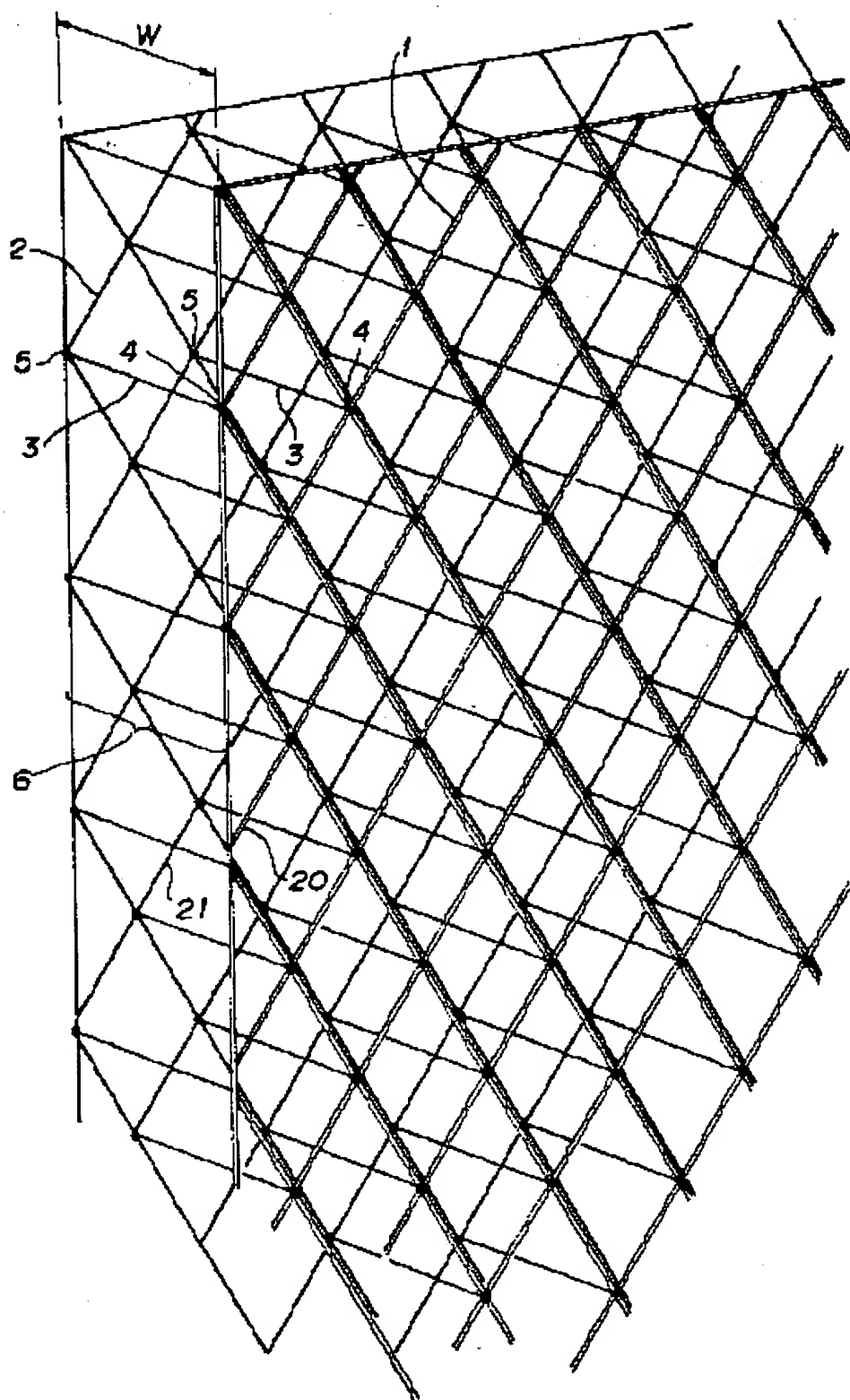
[0034] According to invention of claim 2, a back fabric is the knitting fabric of a coarse mesh finer than table knitting fabric, and it is effective in the prehension effect of fiber waste improving further.

[0035] According to invention of claim 3, it is effective in the nerve as a network for wash and firmness becoming mighty.

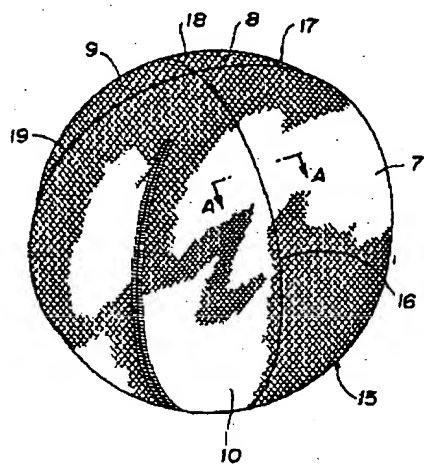
[0036] In invention of claim 4, holding a certain amount of flexibility as a network for wash, firmness is also demonstrated and the prehension effect of fiber waste improves by the increment in the number of yarn.

[0037] In invention of claim 5, the effect which can also catch the fiber waste which passes a coarse-mesh portion is done so.

[Translation done.]

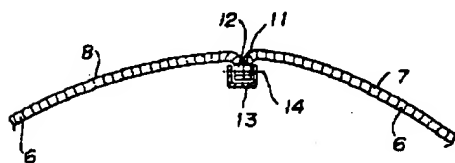


Drawing selection **drawing 2**



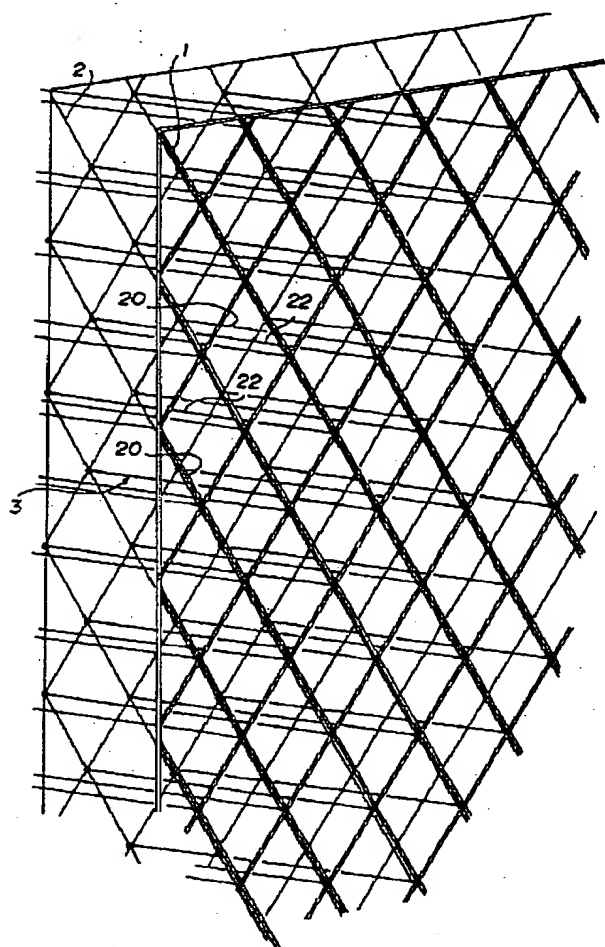
[Translation done.]

Drawing selection drawing 3



[Translation done.]

Drawing selection drawing 4



[Translation done.]